



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/048,086	03/05/2002	Jorg Tillack	Mo-6924/LeA 33,697	1660
157	7590	04/20/2004	EXAMINER	
BAYER POLYMERS LLC 100 BAYER ROAD PITTSBURGH, PA 15205			SELLERS, ROBERT E	
			ART UNIT	PAPER NUMBER

1712

DATE MAILED: 04/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/048,086

Applicant(s)

TILLACK ET AL.

Examiner

Robert Sellers

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Art Unit: 1712

The text of section 103(a) of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmalstieg et al. Patent No. 6,060,574 in view of Groegler et al. Patent No. 4,001,232.

The rejection is maintained for the reasons of record set forth in the previous Office action. The arguments filed April 9, 2004 have been considered and are unpersuasive.

1. Schmalstieg et al. in column 5, lines 26-31 states:

"Examples of suitable amidines in which the CN double bond is a constituent of a cyclic system include 2-methyltetra-hydropyrimidines which are substituted in the 1-position. They can be obtained in accordance as described in DE-A 2,439,550 by reacting N-monosubstituted 1,3-propane diamines with acetoacetic acid derivatives."

2. DE-A 2,439,550 is the priority application for Groegler et al. (cover page, "Foreign Application Priority Data" section). Groegler et al. shows the preparation of 2,3-dimethyl-3,4,5,6-tetrahydropyrimidine in Example 2 (col. 7, line 5), Example 12 (col. 7, lines 58-59) and Example 13 (col. 7, line 67).

3. The primary reference to Schmalstieg et al. specifically refers to Groegler et al. which does not provide a laundry list as evidenced by the numerous examples of the claimed species. The suggestion or motivation to employ the 2,3-dimethyl-3,4,5,6-tetrahydropyrimidine of Groegler et al. as the particularly preferred alkyl-substituted amidine catalyst of Schmalstieg et al. (col. 5, lines 15-17) resides in the aforementioned section of Schmalstieg et al.

Art Unit: 1712

There is a reasonable expectation of success that the use of the 2,3-dimethyl-3,4,5,6-tetrahydropyrimidine of Groegler et al. as the alkyl-substituted amidine catalyst of Schmalsteig et al. reduces the reaction temperature and/or time. The combined disclosures of Schmalstiege et al. in view of Groegler et al. teaches or suggests all of the claimed limitations. Thus, a *prima facie* case of obviousness has been established in accordance with MPEP § 2142 quoting In re Vaeck (20 USPQ2d 1438, Federal Circuit 1991).

Claims 1-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lauman Patent No. 4,753,826 and Xiao et al. Patent No. 6,153,709 in view of (Schmalsteig et al. and Boutillier et al. Patent No. 4,908,408) and (Japanese Patent No. 50-117771 and Tarbutton et al. Patent No. 6,486,256).

The rejection is maintained for the reasons of record set forth in the previous Office action. The arguments filed April 9, 2004 have been considered and are unpersuasive.

4. Tarbutton et al. in column 3, lines 8-11 indicates that "[w]e have surprisingly found that a combination of two different amidine catalyst species, in particular cyclic amidine catalysts, can provide enhanced adhesive properties." The claimed species of 1,2-dimethyl-1,4,5,6-tetrahydropyrimidine is named in column 9, lines 9-10 (equivalent to 2,3-dimethyl-3,4,5,6-tetrahydropyrimidine according to Chemical abstracts registry no. 4271-96-9) and exhibited in column 24, Table 4, Example Catalyst 42.

Art Unit: 1712

5. The Japanese patent particularly designates

1,2-dimethyl-1,4,5,6-tetrahydropyrimidine as a catalyst for the reaction of an epoxy resin and a diisocyanate.

6. The 1,2-dimethyl-1,4,5,6-tetrahydropyrimidine of Tarbutton et al. and the Japanese patent is not part of a laundry list, but is specifically named. The suggestion or motivation to utilize the 1,2-dimethyl-1,4,5,6-tetrahydropyrimidine of Tarbutton et al. and the Japanese patent as the catalyst of Lauman and Xiao et al. is to enhance the adhesive properties (Tarbutton et al., col. 3, lines 8-11), sustain load durability and impact resistance over a wide temperature range, and facilitate epoxy copolymerization with an amine (Tarbutton et al., col. 9, lines 11-20). The Japanese patent confirms the operability of 1,2-dimethyl-1,4,5,6-tetrahydropyrimidine in catalyzing the reaction between an epoxy resin and diisocyanate.

7. There is a reasonable expectation of success that the use of the 1,2-dimethyl-1,4,5,6-tetrahydropyrimidine of Tarbutton et al. and the Japanese patent as the catalyst of Lauman and Xiao et al. facilitates the reaction between the epoxy resin and both amine and isocyanate groups. The combined teachings of Lauman and Xiao et al. in view of the Japanese patent and Tarbutton et al. teaches or suggests the claim limitations regarding the 2,3-dimethyl-1,4,5,6-tetrahydropyrimidine catalyst.

Therefore, a *prima facie* case of obviousness has been established in accordance with MPEP § 2142 quoting In re Vaeck.

Art Unit: 1712

8. According to MPEP § 2144 under the heading "RATIONALE DIFFERENT FROM APPLICANT'S IS PERMISSIBLE", "It is not necessary that the prior art suggest the combination to achieve the same advantage or result discovered by applicant (*In re Linter*, 173 USPQ 560, CCPA 1972; and *In re Dillon*, 16 USPQ2d 1897, 1901, "it is not necessary in order to establish a *prima facie* case of obviousness that . . . there be a suggestion in or expectation from the prior art that the claimed compound or composition will have the same or a similar utility as one newly discovered by applicant.").

9. The motivation of employing the 1,2-dimethyl-1,4,5,6-tetrahydropyrimidine of the Japanese patent and Tarbutton et al. as the catalyst of Lauman and Xiao et al. to impart adhesive properties, sustain load durability and enhance the epoxy-amine and epoxy-isocyanate reactions is permissible even if it does not conform to the alleged motivations.

Art Unit: 1712

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

(571) 272-1093 (Fax no. (703) 872-9306)
Monday to Friday from 9:30 to 6:00 EST

Any administrative inquiries can be obtained by accessing the Patent Application Information Retrieval (PAIR) system. Published applications are available through either private or public PAIR. Unpublished applications are available via private PAIR only. Consult <http://pair-direct.uspto.gov> or contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).



Robert Sellers
Primary Examiner
Art Unit 1712

rs
4/16/04